

Abstract of the disclosure

A rotary pump which comprises a pump casing, a casing cover for defining a pumping chamber with the pump casing, a pair of rotors within the pumping chamber and having end surfaces adjacent to the casing cover, and pumping segments engaged with each other for synchronous revolution in mutually opposing directions within the pumping chamber, a gearbox, adjacent to the pump casing, synchronous driving gears disposed within the gearbox, a pair of hollow rotor drive shafts having a hollow portion, and an outer end, each of the drive shafts being interconnected with each of the rotors for integral rotation therewith, the drive shaft being supported in the gearbox and being coupled with one another by the driving gears, and each of the driving gears being mounted on each of the drive shafts in a mutually meshing condition with the hollow rotor drive shafts being synchronously rotated in mutually opposite directions and meshing with the driving gears, a pair of rotor fastening bolts, each having a bolt head at one end thereof, the bolt being inserted into a hollow portion of a hollow rotor drive shaft and being tightened for securing one of the rotors to one of the hollow rotor drive shafts with the bolt head being anchored to the outer end of the rotor drive shaft, an extended drive shaft portion formed by one of the hollow rotor drive shafts extending outwardly from the gear box, a cylindrical transmission coupling having an operating space, and being coupled with the extended drive shaft portion for integral rotation therewith with the operating space accommodating the bolt head of the rotor fastening bolt.